
Title	Reading instruction in lower primary classes: A second observational study
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Source	<i>Singapore Journal of Education</i> , 7(2), 55-64
Published by	Institute of Education (Singapore)

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Reading Instruction in Lower Primary Classes: A Second Observational Study*

Maureen Khoo and Ng Seok Moi

Introduction

1985 marked the beginning of the implementation of the Reading and English Acquisition Programme (REAP) — a programme aimed at retraining lower primary English teachers in reading and English language instruction. This programme covering 90 schools in 1986 evolved from research conducted by the Institute of Education personnel. The Reading Skills Project (see Ng, 1984), a 3-year study, examined pupils' reading progress from Primary 1 to 3 in 35 schools; a teacher-observation study looked into reading instructional activities in 24 of the above schools. There was simultaneously a search for reading instruction approaches suitable for the Singapore classroom followed by a small feasibility survey on a chosen approach; a re-examination of in-service reading courses and a literature search for strategies for programme implementation. The present study attempts to discuss only the teacher-observation facet of the total research work behind REAP. In view of the fact that Singapore-based teacher-observation studies are few (see Evaluation of CLIPS, 1981) and studies on the teaching of reading in lower primary still fewer (see Ng, 1980), it is important to first record the research findings for the study done in 1984, and their implications for classroom practice. As this study both replicates and extends a similar study done earlier, teacher educators and educational authorities may find, from the accumulated experience, confirming evidence of directions for a retraining programme for reading teachers, and the urgent need for both curriculum and instructional change in this field.

Purpose and Design

This study was aimed at obtaining a description of reading instructional activities in the first three years of Singapore primary schools. More specifically, the study investigated aspects of reading instruction

like content emphasis, class grouping, predominant reading activity and teacher activity, amount and nature of guidance and materials used. It served as a follow-up to a similar exploratory study done 3 years before (Ng, 1980). The 1980 exploratory study had 1 observer observe 36 reading lessons from Primary 1 to 3 in 12 schools, and conduct 36 teacher-interviews. By contrast, the present study using 3 observers covered 72 reading lessons from Primary 1 to 3 in 24 schools and included the use of a classroom observation schedule for quantifying patterns of teaching emphasis. It was assumed that the wider sample and the more refined instruments would increase the generalization of the findings.

The Observation Instruments

Three different instruments were used for the classroom observation exercise: an observation coding schedule, a semi-structured questionnaire, and an evaluation checklist. The descriptors for the checklist were found to be unrealistic for the Singapore classroom and data from this instrument was subsequently unused.

Observation Schedule

The observation schedule was adapted from a study by Michigan State University's Institute of Research on Teaching (Duffy and Anderson, 1982). It measured quantitatively time distribution given to various reading instruction activities within a 30-minute reading period. It comprised a chart for minute by minute coding into 7 main descriptive categories of reading activity (see appendix A). The coding in each category was scored on a 100% basis.

* The authors gratefully acknowledge the joint contribution of the following Project team members in this study: Gail Hanamoto-Rahman, Diana Lew and Ng Chwee Poh.

The main categories were: group work, general subject area, reading/language related activities, teacher activity, vehicles of instruction, favoured word identification prompts, and comprehension prompts. For greater precision, these categories held 51 subcategories, 15 of which were further subdivided. A large number of variables help where there is little theory for formulation of items (Medley and Mitzel, 1963). The Duffy and Anderson observation schedule on reading, with its wide spectrum of instructional variables and its feature of incorporating into one the recording of both teacher and student activities, was preferred to another observation schedule (Southgate, Arnold and Johnson, 1981) which comprised only 11 teacher and 12 student categories that had to be charted in separate tables. The multiple focus in the Duffy study was suitable for the purpose of investigating multiple aspects of reading instruction in the classroom.

Questionnaire

The teacher questionnaire, used also in the 1980 exploratory study, was semi-structured. Through 9 questions posed to the teacher after each observation, the questionnaire probed teachers' lesson objectives, teachers' criteria for class grouping, their knowledge of alternative reading instruction approaches, adequacy of administrative support materials, and adequacy of training and teaching approaches.

By eliciting from teachers the global and non-visible aspects of their practices, the questionnaire provided supplementary data on reading instruction not possibly gathered from the observation schedule or from the constraint of observing one reading period per teacher. The questions were formulated by one of the authors (Ng) from her experience in the field and guided by Moore's analysis of common characteristics in 300 United States reading programmes that had gained unusually high achievement (Moore, 1980). Although so focused in range, the questions were sufficiently open-ended to allow for atypical conceptual stances in teachers' replies.

Procedure

Preliminary testing of the instrument and observer training were carried out simultaneously through October 1983 to January 1984. After trial sessions, subcategories of the schedule were redefined where necessary for more accurate description of local teaching behaviour. Observers under training subjected themselves to a minimum of 35 practices to

maximize observer reliability. Checks for inter-rater reliability were taken at 13 of these practices. An average observer agreement coefficient of 80.7%, based on percentage agreement, was attained by the last week of January. Actual observations of 72 reading classes from 24 schools were done over a period of 12 days in February by 3 trained observers from the Reading Skills Project.

Limitations of the Study

The major constraints of the study were manpower and time. A small team of 6 had to cover a sufficiently large representative sample population. The observers needed quick training and adequate practice sessions before a satisfactory inter-rater reliability coefficient constant was reached. The search for a model observation schedule was especially difficult due to a lack of reading observation schedules on reading instruction.

Limitations of the teacher-observation instruments can be summarized as follows:

1 The traditional limitations of observational systems apply to the observation coding schedule. General conceptions (of reading, in this case) were inevitably captured in prespecified categories, allowing little development of new insights or theories not encompassed by category descriptions (Medley and Mitzel, 1963; Bealing, 1973; Hamilton and Delamont, 1974). Used without other instruments, it provided merely a partial view, capturing only visible behaviour and what was measurable.

2 The descriptions of coding items were rephrased and redefined during the trial run of the instrument. However, the categories still needed further adaptation and refinement since there was found to be a lack of independence of data for some categories, e.g. coding 'transition' in category General Subject Area automatically entailed coding the same in category Teacher Activity. On the other hand, some other categories had to serve for coding up to 3 activities.

3 There was no provision for coding the use of more than one vehicle of instruction at a time, and this occurred fairly frequently during the observation.

4 The time unit chosen for coding (60 sec) was too long as there were many occasions when 2 or 3 changes of activity occurred within that period of time. This limitation and the previous one (3) could have been simultaneously catered for if the time unit for observation had been reduced to 30 seconds.

5 A larger number of visits to the same teacher by different observers over a longer period of time, and repeated observations over a period of a year could have catered for greater reliability and stability of findings. The omission of a stability coefficient (also true of the 1980 study), however, appears less serious when one notes the enormous similarity of findings of this 1984 study with that of 1980.

6 A more complete picture of the status of reading would have been obtained if observers had also observed English periods other than reading to see how reading instruction was or was not integrated with language and writing instruction and library activities. A fuller picture of the teachers' perceptions of reading would have been revealed as well as the Singapore child's exposure level to reading instruction during English lessons.

Findings

For ease of reporting, results from both the observation schedule and the questionnaire are discussed simultaneously.

1 *Time Spent on Reading*

Questionnaire items on curriculum time used for reading periods revealed that there was an average of four 30-minute periods per week for Primary 1 and 2 classes and an average of three 40-minute periods per week for Primary 3. Reading periods were observed to be used mainly for oral reading (80% of time). Other language activities during reading periods like writing, listening and speaking were negligible. Most of the remaining time was spent in transitions between instructional activities. This means lesson time was used for change of activity, change of groups or for setting up visual aids. Most transition times were used at Primary 1 level.

2 *Grouping*

The observation schedule recorded percentage time given to reading conducted for the whole class or reading in subgroups. It was found that across the 3 levels approximately half of the class time was given to whole class activity and half to subgroups. At the different levels, there was more time spent in subgroups in Primary 2 (71.4%) and the most in whole class groups in Primary 3 (64.7%). Classes had an average of 3 subgroups.

Because of large class enrolments percentage time given to individual students either in the whole class grouping or the subgroup was also noted in the

observation. It was found that across the three levels, individuals were called upon to respond for an average of 40% of class time.

In response to the questionnaire on what criteria they used to group their students, about 40% of the teachers cited oral reading skills like pronunciation, intonation and fluency. 16% used academic ability and 22% admitted to not grouping at all, giving reasons of time constraints and inadequate knowledge of the children (at time of interview). Students were also grouped by word recognition ability, oral English proficiency, at random, or according to seating convenience. A small number of teachers who opted for mixed ability grouping were of the opinion that weaker students could benefit more from being with better students.

3 *Catering for Range of Ability*

Teachers' responses showed that though children worked in subgroups for 50% of class time there was minimal catering for students of varying ability. Practices cited appeared to be isolated moves and not integrated, considered strategies. There was also little distinction found in the practices advocated for 3 different class levels.

Teachers had more ideas for providing for poor readers rather than good readers. Providing extra oral reading was strongly advocated (39%) for poor readers. 15% advocated giving extra word recognition drills and 11.5% advocated more phonics instruction. Less than 5% recommended slower pacing, providing materials of different levels, and remedial lessons, and only 6.4% recommended more reading for weaker students. For better readers, teachers from the 3 class levels advocated access to more stories and materials, and more written work. Ideas like more reading, assignments to read and write about books read, using good readers as models, and providing materials with more difficult content, came from less than 10% of the teachers interviewed.

4 *Reading and Language-related Activities*

Of the 32 reading activities, and activities related to reading that were listed in 7 main categories in the coding schedule (see Appendix A), the 2 activities coded most frequently were reading flashcards of word or sentence (36.7%) and reading aloud the basal reader (26.7%). The factual recall type of comprehension activity ranked third in frequency (12%) while oral language activities ranked fourth (7.3%). Least time was given to activities that promoted affective response to reading (0.1%) and

to activities involving applying reading skills to complete a task (0.7%).

A pattern of increase or decrease of some activities through the different class levels was also evident from class observation. Word or sentence recognition as well as oral language activities showed decreasing class time through Primary 1 to 3. Word or sentence recognition, with alphabet recognition, took 70.6% of class time in Primary 1, decreasing to 18.7% in Primary 3. Oral reading of basal readers increased between Primary 1 and Primary 2, but decreased in Primary 3. Comprehension activities increased 6 times and vocabulary teaching time tripled between Primary 1 to 3.

When questioned on the instructional approaches used, teachers responded by citing instructional activities. They did not see instructional approach as a selected sequence of activities reflecting one integrated view of reading.

A more detailed variation of activities was listed by teachers as being used when responding to the questionnaire, though not all activities cited were observed in the classroom. Flashcard activities covering both word and sentence recognition, and vocabulary discussion including sentence construction with flashcard words, were most popularly cited. Most of these were observed in the classroom. Two popular variations to reading aloud activities were the teacher-read-child-read and individual-read-group-read activities. Of the two, the latter were more often observed. Teacher demonstrating reading of text showed increasing time through Primary 1 to Primary 3. Silent reading cited as an alternative for all 3 levels was found mainly in Primary 3. Phonics teaching cited by Primary 2 and Primary 3 teachers as alternative activities was, however, observed most in Primary 1. Other activities cited like drawing out the experience of the children to lead into the story and dramatization were observed to be minimal.

5 *Teacher Activity*

The teacher's activity was given direct focus in the classroom observation. It was observed that at all levels the teachers were engaged for most of the time in 3 activities — practice or recitation, guided assistance and transition or set-up time. Guided assistance was defined as occasions when teachers provided close guidance in tasks other than actual reading, e.g. when they gave phonics cues. Practice or recitation occurred when teachers posed set questions from the reading text or when children read on with the teacher helping only at the start

of the recitation. There was minimal guidance given at these times and activities were drill-like. Transition time has been defined and discussed earlier (see 'Time Spent on Reading' p. 57).

It was found that Primary 3 teachers gave most guided assistance (30.6%) and Primary 2 teachers gave most time for recitation/practice (46.4%). Teachers at all 3 levels were engaged in these 2 activities alone for 62% of the mean class time.

Teachers circulated among the children to give individual assistance most in Primary 1 (10.1%). This was reduced in Primary 2 and increased again in Primary 3. Incidental instruction, defined as making the most of an opportune moment to introduce or explain a learning point, was observed only once at Primary 3 level.

6 *Favoured Word Identification and Comprehension Prompts*

Related to teacher activity was the observation of the type of prompts given by the teacher in reading instruction. 'Prompt' was defined as a corrective cue and applied to occasions when a child made a reading error. Word prompt cues used by teachers at all 3 levels were limited in range. Most often (50.7% of class time) teachers' prompts consisted of correcting children's pronunciation. Frequently they said the word for the child (29.4%). Occasionally teachers indicated the error but left the child to correct her/himself (12.6%). Less often teachers gave phonics or structural analysis cues (4.2%). Context cues were rarely given (1.4%).

The comprehension cues used were more varied through the levels, and especially within Primary 3 level. But teachers mainly resorted to 3 types: posing a series of leading questions designed to lead the child to an understanding of content, referring to life experiences to help understanding, or cueing the child by referring to a picture or illustration to aid understanding. In Primary 1 and Primary 3 leading questions were the most frequent type of prompt. Teachers also gave grammatical cues and directly supplied the answer at Primary 3 level. Very infrequently, they gave contextual cues.

7 *Vehicles of Instruction Used*

It was observed from coding classroom activities that the vehicles of instruction used at the 3 levels were very limited in range. The three most common ones — flashcards, the basal reader and the blackboard — occupied a mean total of 77% of class time. At Primary 1 level the flashcard was the most

frequently used item, and the basal text ranked third. At Primary 2 and Primary 3, however, use of the basal text was most frequent and flashcards took a second place. The first 5 most frequently used vehicles of instruction for Primary 2 and Primary 3 were similar, the use of the cassette-player and teacher-talk-pupil-talk alternately taking fourth and fifth place. This was not the case in Primary 1 where pictures and paper-pencil ranked fourth and fifth while teacher-talk-pupil-talk and cassette playing took eleventh and twelfth place. Visual aids consistently used through the 3 levels were flashcards, charts and puppets. No use of centres, reading kits or games were observed. More importantly there was scarce use of print materials other than the basal reader. Teacher-made materials observed were minimal (1.6%).

On the question of supplementary or additional materials used, 34.9% of the teachers responding claimed that they were using MOE supplied supplementary materials. 24% claimed they used other commercial publications (mainly Ladybird) while 20.4% claimed that they used library books (from school, class, students). The predominance of use of MOE supplementary materials was verified during classroom observations since workbooks, pictures, charts, tapes and even puppets observed and coded were often MOE supplied materials. More significantly, 12.6% reported not using any additional materials.

8 Teacher Knowledge of Reading

Evaluation techniques

The questionnaire revealed that the only systematic continuous evaluation technique found was the once-a-term/semester formal oral reading tests which took the form of reading graded vocabulary lists and sentences from a reader or from a teacher resource book. Out of 67 teacher responses, 44 claimed they merely made a mental note of good and poor readers from the children's oral reading during class.

The most variety of evaluation activities reported — 7 items — occurred in Primary 1 but these and the 5 evaluation activities reported for Primary 2 and 3 showed isolated moves like remedial classes in a school where individual practice and reading assessment were given, and children in Primary 2 and Primary 3 classes in 2 schools made to keep a quantitative check on their own reading volume.

Important reading skills

When questioned on their perception of important reading skills, teachers identified the skills in the

following order of frequency: word or sentence recognition (especially Primary 1 teachers), phonics, comprehension ability, fluency, pronunciation, silent reading and sound discrimination skills.

9 Assistance from MOE/In-service Training

It was found that 45 out of the 72 teachers (62.5%) interviewed had not attended courses in the last 5 years, 12 of these had their training 10 years ago. Of the remaining 27 trained recently, 11 were Primary 1 teachers.

On being asked what the Ministry of Education could do to help reading teachers and what kind of in-service training should be provided for practising teachers, there was some consensus (30.4%) that class enrolment in lower primary should be smaller, a suggested maximum being 35. More spacious classrooms for lower primary was also suggested. Teachers next asked for better and more teaching aids and easier access to media materials on loan to schools. There was a substantial request for more block periods and more flexibility in instruction time, more reading periods as well as a more flexible and lighter syllabus load.

In probing what teachers perceived as areas of need for retraining, reading courses in remedial reading formed the largest single request (26%). The next largest demand was for retraining in reading methods with particular reference to flexible approaches to word attack skills and for making a reading lesson interesting. Speech training and knowledge of sound production formed the third area of demand.

Some felt the need for greater expertise in conducting group activities and group management while others asked for teaching of phonics. Only a few did not feel the need for any in-service reading courses.

Implications for Classroom Practice

Findings from this study are markedly similar to that of S M Ng's description of the reading instruction situation in Primary 1 to 3 Singapore classrooms 3 years ago (see Ng, 1980).

The observers felt keenly the teachers' brave efforts in the face of enormous external constraints, some of which were large class enrolments (average 40), classrooms allowing little mobility, tight syllabi, and inflexible timetabling and examination pressure in Primary 3. More critically, the observers found that the teachers lacked understanding of the reading process and of learning-to-read strategies. They seemed unaware of the implications in their choice of instruc-

tional approaches and vehicles of instruction; they lacked assessment skills and measured control of pupils' reading progress. They appeared to have little idea of how to provide for readers of different abilities and different age groups. They varied their organizational grouping units but were not utilizing these fully or understanding the impact of their organization methods. They were in great need of exposure to knowledge of available supplementary materials and had little access to these materials.

Time Spent on Reading

Curriculum time

The average 3 periods (1 hr 52 min) out of the 15 English periods allocated to reading are grossly inadequate. This is especially so for beginning readers like our second language pupils who enter school with little or no oral English facility on which acquisition of reading must depend (Ruddell, 1976; Wardhaugh, 1971; Chomsky, 1970). Primary 1 and 2 teachers in particular need to be given more autonomy to control curriculum time and syllabus to cater for the wider range of language progress of their pupils. The existing situation of some lower primary classes having non-English speaking form teachers needs to be reviewed as this arrangement has instructional repercussions. Reading teachers who have to take over such classes for language and reading have not only minimal reading instruction time with such classes, where they are only subject teachers, they have also curtailed curriculum time with their own home classes which means less flexible use of periods for reading activities. In such situations, it is hardly possible to have time to evaluate the individual child's reading in any of the classes they teach.

Time on task

An average of 19% of lesson time was spent in transition and breaks, most transition time occurring in Primary 1. This may be due to more activity changes, and more time required to instruct new pupils between change of groups and teaching. Researchers have found that a great proportion of lesson time (25%) is spent in non-teaching activities and that teachers teach for far less time than they imagine themselves to be doing (Southgate, Arnold and Johnson, 1981). Use of centres, where space allows in the local classroom, and training children into a routine of being given the week's assignment on a chart might help to reduce transition times. Flexible timetabling and providing an English teacher with as many periods as possible in his own class would also effectively stretch time for activities.

Grouping

Value of subgroups

In contrast to a whole class situation where teacher attention time is parcelled out to 40, the subgroup is one way of providing a longer period of teacher attention (Boydell, 1978). It provides opportunity too for the one-to-one basis needed for reading instruction (Clay, 1979) and permits time for questions of a higher cognitive level (Southgate, Arnold and Johnson, 1981). The ill effects of a pressured curriculum may be seen then in the sharp decrease of subgroups from Primary 2 to 3 when teachers most likely dispensed with them in the face of pressured teaching of the syllabus in order to prepare children for their important Primary 3 examination.

Grouping criteria

It can be observed that some teachers' criteria for streaming into groups, such as general academic ability or seating location, could not validly provide for reading or language ability groups, one important management strategy for efficient group teaching.

Catering for different abilities

Although 50.5% of instruction time for 72 classes was spent in subgroups, little use of subgroups for matching differing pupil ability was made. Large subgroups (averaging 13) assigned the same tasks, taught at approximately the same pace and using the same materials merely had the effect of cutting down on numbers. They failed to cater for individual differences.

Instructional activities neither differed sufficiently between the 3 class levels nor catered for children with different progress levels within a class. A greater understanding of developmental stages of reading skills is needed here. Since beginning readers and poorer readers are often less proficient in language, supply of audio-visual materials, charts, pictures, games, and puppets are especially important for them. Contrary to what was observed, poorer readers rather than the better ones need to be well supplied with additional reading materials (of a level they can read with 95% accuracy). They need motivational activities like having stories read to them, and frequent approval. Teachers have to understand that, contrary to their belief, it is not a phonics emphasis that will help them. Phonics demands an analytic skill that these very readers do not have. They are unable to put together abstract bits and pieces of reading instruction but often are the ones given greater doses of such splintered instruction phonics and word attack skills, while better readers get a

chance at increasingly more natural and more interesting language found in story books (Goodman, 1970).

Remedial classes held for such readers provide the advantage of smaller numbers and more individualized attention, but their effectiveness is in question if normal classroom instructional activities are conducted during remedial class time.

Teacher Activity

As teachers failed to see instructional approach as a coherent mix of ideas for teaching, reflecting one view of reading acquisition, their choice of teacher activity, teaching method, and materials used had no clear integrated purpose.

Teaching word recognition

The teachers in their preoccupation with word recognition revealed a lopsided and outdated view of the process of learning to read. They did not seem to realize that reading has been found to be not merely sequential letter or word identification, but more a psycholinguistic guessing game, anticipating words to follow by use of minimum syntactic or semantic cues available to the reader (Goodman, 1970). In the light of this, presentation of words in a context familiar to the child is all-important. He should be taught new words couched in words he already knows so that his own knowledge of syntax and semantics would cue him for word recognition. Excessive emphasis on word recognition skills may only make a child 'bark at print', not derive meaning from it. This is doubly important for the second language user since even knowledge of phonic cues or other word attack strategies for sounding out words would not help him get at their meaning.

Aiding higher level processing

The language activities engaged in revealed that teachers tended not to teach independent processing skills. The predominance of comprehension factual recall and recitation/practice over that of guided assistance was such a case in point. Comprehension exercises at factual recall level are almost solely based on memory or syntactic use. The higher cognitive skills are neglected. Recitation is repeated practice. It may lead to word-perfect reading of a passage but the young reader has not picked up any transferable reading skills.

Prompts

Another teacher shortcoming was seen in word and comprehension prompts used. When the teacher merely says the word for the child, no processing is required of the child. For comprehension prompts,

the teacher is helping towards independent processing if he cues with direct reference to the text, with visual cues, or by bringing attention to the language elements. However these were not the most popular prompts used.

Vehicles of Instruction

The teachers observed were found to rely heavily on basal readers. While a well prepared series may be well graded and well matched to a group of students reading at any point of time, such matching is destroyed if a whole group of children is forced to progress through the series regardless of individual reader's ability (Holdaway, 1979). This is true if the series is not well graded. Basal series tend to become contrived and unnatural reading and are terribly discouraging for children who find them difficult, particularly if there is little supplementary reading.

To offset the ill effects of using one set of basal readers, a variety of guided readers and free reading materials for readers of varying abilities should be made available to every lower primary class.

Teacher Knowledge of Evaluation Techniques

The teachers observed could have been better equipped to monitor group or individual progress in reading and to group children more accurately if they had been equipped with some knowledge of Informal Reading Inventory tests, and of how to take running records of a child's reading.

Meanwhile quantitative checks on children's reading should be monitored as simply as possible with perhaps an occasional group competition or sharing session to maintain interest.

In-service training

A comprehensive retraining programme for reading teachers is obviously long overdue and a great deal of the misconceptions and ignorance about reading can be cleared by such a programme. Such a massive retraining programme, however, needs careful planning based on sound psychological principles and close monitoring if its effects are to be lasting.

Conclusion

What comes as a startling revelation in the 1984 study is the unchanged situation of teacher needs 3 years after an earlier study had indicated the trends. Both studies point to the fact that current instructional practice in reading in most Primary 1 to 3 classrooms is questionably effective. This arises from the

teachers' lack of an updated understanding of the reading process and their uninformed choices of reading instruction activities. Learning to read through isolated word recall and through reading aloud after the teacher have been found in the study to take precedence over reading for meaning and enjoyment. Reading is not observed to be an integral part of learning other language skills. Teachers have little practice opportunities for curriculum decisions as they have frustratingly little control over textbooks and curriculum time. Yet the onus of instructing every Singapore school child in basic literacy rests on them.

It appears through this study that current in-service reading courses for reading teachers need to be changed drastically in scope and form in order to reach all lower primary teachers effectively. The solution appears to be a shift to class-based teacher-retraining. This would mean a building up of teacher knowledge of reading instruction at classroom practice level through long term monitoring of teachers in their use of the two approaches found suitable for the Singapore classroom: the Shared Book Approach and a modified form of Language Experience. The recommended approaches stress reading for meaning and enjoyment; integrating reading with writing, listening, and speaking in natural sequence; providing abundant opportunities for independent and

enjoyable reading practice; and the use of different variations of grouping to cater for different progress levels of children. Teachers would be trained to question and to cue pupils with the objective of leading children towards independent processing of print. Guidance for teachers in the form of close monitoring and provision of guidelines would then gradually decrease as teachers in training become increasingly adept at these instructional approaches and in other instructional decisions. Organizational support could be given in terms of arranging for more timetable flexibility for English periods and flexibility in the use of prescribed textbooks and workbooks.

As the teacher is the final agent of change, attitude change in the teacher is the only guarantee of a permanent improvement in instructional practice. The programme bears, in mind, therefore, that its implementation strategies have to be conducive to teachers.

Such are the main features of the Reading and English Acquisition Programme (REAP) conceived by the Reading Skills Project team and introduced to 30 schools in 1985 and to 60 more schools in 1986.

An investigation of the reading teachers' knowledge of reading instruction and their attitude to educational change 3 years from now would provide interesting findings. ■

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CODING CATEGORIES — 1

Group Work	Language Related Activities	
1a Whole Class	0 Alphabet recognition/writing/grammar/unclassifiable language activity	4 Comprehension (Skill teaching)
b Individual in whole class setting		•0 Unclassifiable
2a Subgroup	1 Guided reading of graded stories	•1 For literal/factual recall
b Individual in Subgroup setting	•0 Unclassifiable mode of guided reading	•2 For inference
	•1 Oral reading: Teacher AND Child read	•3 For critical evaluation
	•1a Teacher reads	•4 Meanings of words
	•1b Child reads	
	•2 Silent reading	5 Using oral language experience
	•3 Reading with dramatization/role play	•0 Unclassifiable
		•1 Building oral language facility/sharing experiences (non-text related)
		•2 Build up from experience to text story/creating reading stories based on experiences
		•3 Reading with expression
	2 Word Recognition	6 Study Skills
	•0 Unclassifiable word recognition activity	7 Using reading to solve a problem or complete a task
	•1 Sight words and/or visual discrimination	8 Affective response to reading
	•1a Oral reading of isolated words/phrases	•0 Unclassifiable
	•1b Oral reading of sentences	•1 Reading to class
	•2 Phonic analysis and/or auditory discrimination	•2 Expressing interest in books
	•3 Structural (prefixes, root words, endings etc)	•3 Directing/supervising interest-based activities
	•4 Context (using sentence sense)	
	3 Comprehension (General Questioning)	
	•0 Unclassifiable	
	•1 Factual/literal recall	
	•2 Inferential	
	•3 Critical evaluation	
	•4 Explains/clarifies basal story	
General Subject Area		
0 Unclassifiable		
1 Reading/vocabulary work/writing for reinforcement of reading		
2 Other language related activities		
a Writing		
b Listening		
c Speaking		
3 Spelling		
4 Transition from one instructional activity to next/managerial/"set-up" time		
5 Other breaks/lesson interruptions		

CODING CATEGORIES — 2

Teacher Activity	Vehicles of Instruction	Favoured Word Identification Prompts
0 Unclassifiable	0 Unclassifiable	0 Unclassifiable
1 Incidental instruction (teachable moment)	1 Blackboard	1 Letter by letter phonics
2 Direct instruction (planned)	2 Paper/pencil	2 Phonic parts and/or structural analysis
0 Unclassifiable	3 Visual aids	3 Visual words cues (sight words)
1 Lecture about content/ introduction to lesson	•1 Pictures	4 Context plus initial consonant
2 Guided assistance (phonics/ comprehension discussion/ not applied to reading)	•2 Charts	5 Context
3 Practice/recitation (children read on with little or no guidance/comprehension through using text questions only)	•3 Slides/filmstrips/movies	6 Simply says the word for child
4 Application (transfer of what was taught to a reading task)	•4 Overhead/opaque	7 Experience cue
5 Teacher oral reading to class	•5 Flashcards	8 Attention cue ("look at that again")
6 Teacher reads child(ren) read(s)	•6 Puppets/others	8a Writes word on blackboard
3 Monitoring	4 Tapes/records	9 Pronunciation/phrasing corrections
4 Testing	5 Centres (for learning)	
0 Unclassifiable	6 Commercial materials	Comprehension Prompts
1 Formal	•1 Basal textbook/manual	0 Unclassifiable
2 Informal	•2 Reading kit	1 Experience cue
5 Transition/managerial/"set-up" time/assigning/collecting materials/giving directions/marking papers	•3 Workbook/exercise book	2 Visual cue
6 Record keeping/lesson preparation	•4 Games	3 Leading questions
7 Not instructing	•5 Tests	4 Direct reference to text
	•6 Supplementary reading books/ dictionary/word lists	5 Language elements
	7 Teacher made materials	6 Gives answer
	•1 Experience stories (using children as source)	
	•2 Home-made reading stories	
	•3 Practice materials (games/ exercises for practice/review)	
	8 Teacher talk/pupil talk	